ABSTRACT OF THE DISCLOSURE

In a knowledge classification system, both the information sources and queries are processed to generate knowledge representation graph structures. The graph structures for both the query and the information sources are then converted to views and displayed to a searcher. By manipulating the graph structure views for each information source, the searcher can examine the source for relevance. A search can be performed by comparing the graph structure of the query to the graph structure of each information source by a graph matching computer algorithm. Information sources are classified by constructing hierarchies of knowledge representations. The simplest construction is obtained by using the knowledge representation of a query as the top of the hierarchy. The structures in the hierarchy are substructures of the query. The hierarchy of structures may also be constructed by using the knowledge representation of the query as the bottom of the hierarchy. Structures in the hierarchy, in this case, are structures that contain the query. The vertices of a graph structure view can be displayed on a computer screen next to the corresponding items, such as words, phrases and visual features, of an information source view. Selecting a vertex in the graph structure causes the selected vertex and vertices adjacent to the selected vertex to be "highlighted." By selecting a succession of vertices in the graph structure, a searcher can perform knowledge navigation of the information source. By successively selecting items of the information source, a searcher can perform knowledge exploration of the information source.

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